Assessing the consequences of technology.
A look into the future with a sense of responsibility.

Forecasting the future – a tricky business.

“Looking into the future is impossible!” Man has made nature predictable to an impressive degree, but there is one thing which as a matter of principle we cannot know and that is what we will know in the future – for if we did, we would know it already.”

Despite these fitting words from the philosopher Karl Popper, even today’s society has been unable to shake off the desire to know something about the future. Science collects and evaluates knowledge today as a means of estimating what technical progress will be made tomorrow.
In earlier eras too, people strove to see into the future – and were often mistaken. For example, Thomas Robert Malthus forecast in the eighteenth century that people would die of starvation and the population would rise twice as fast as the production of food. It was clearly beyond his powers of imagination to realise that technical progress could increase the output of food many times over.

Jules Verne was closer to the truth with his forecasts: many of the inventions described in his books have already come about in practice. In 1874, for instance, he wrote:

“Water is the coal of the future.”

The BMW Group was the first industrial undertaking to pursue this vision systematically with its Clean Energy Concept and develop it for use in the automobile. For this major step forward in the energy field, the BMW Group has been awarded the 2002 “Energy Innovation Prize”.

The new century’s leading-edge technologies.

As we enter the twenty-first century, we can see that three scientific disciplines are of outstanding importance. They can be said to form the basis for ongoing technological progress and innovation.

Quantum physics are the starting point for research and work on matter. Electronic information and communication technologies are taking us into a networked social environment. Molecular biology has the aim of cracking the codes of life itself in many areas and using this knowledge for the good of mankind.

Immense development potential lies in the combination of these disciplines. It depends, however, on many cross-linked technologies and tools undergoing further development. This not only involves increasing the performance of computers and software but also, for example, making further advances in such areas as scanning electron microscopy, laser and microsystems technology, research into materials and process technology.

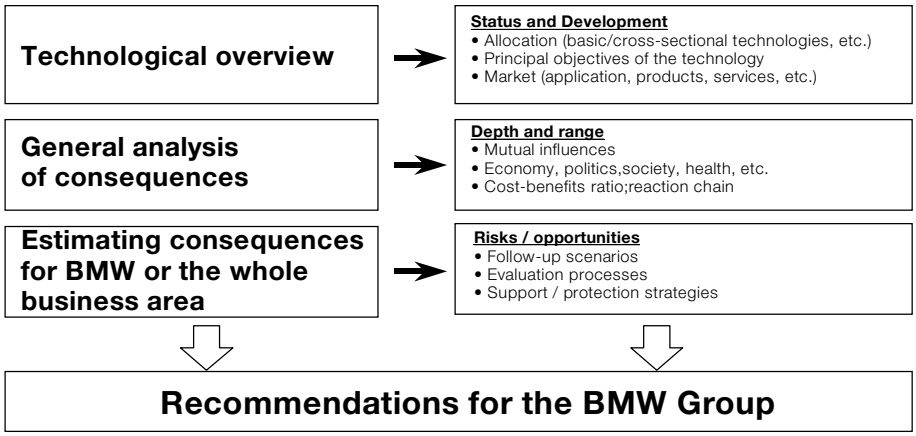
Science and research naturally need support from their environment if they are to come up with innovations. This includes unrestricted access to information and data,

suitably adapted structures and facilities and the availability of the appropriate funds for such all-embracing future projects.

The BMW Group's role in assessing the consequences of technology.

The BMW Group supports discussion and decision-making processes by means of risk assessments that relate to the direct and indirect consequences of development work on certain technologies. This process is geared to the methods stated in the chart.

Methods of assessing technological consequences



Individual consequences have to be taken into account for the following areas:

- The environment and safety: people, nature and living conditions
- Society: social welfare, culture and education
- Politics and legislation
- Industry: management and production, employment and the workforce, services provided and consumption
- Mobility and transport, the infrastructure

The following topic-areas are subjected to intensive study:

- Climate, emissions and air quality
- Energy technology, particularly regenerative forms of energy
- Fuels, in particular hydrogen
- Maintenance of mobility
- Recycling, in association with weight-saving construction
- Electronics and software development

It is only by means of complex risk assessment in the stated fields and topic-areas that the BMW Group is able to play its part in bearing the responsibility for technical progress.